

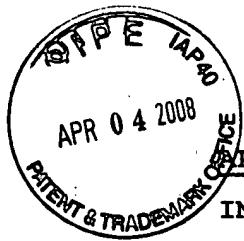


APPLICATION NO. 10/806,016

INVENTION: Multi-scale code division frequency/wavelet multiple
access

INVENTORS: Urbain Alfred von der Embse

Currently amended copy of the ABSTRACT of
the disclosure



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ABSTRACT _____ ABSTRACT OF THE DISCLOSURE

~~The present invention describes~~ A new communications architecture ~~that combines~~ orthogonal frequency division multiple access OFDMA and orthogonal Wavelet division multiple access OWDMA ~~with multi-scale code division multiple access MS-CDMA. This invention describes the~~ The new multi-resolution complex Wavelet ~~and the application to for~~ OWDMA which is a Wavelet generalization of OFDMA ~~in IEEE standards 802.11a, 802.11g, 802.15.3a, 802.16. OWDMA and~~ forms multi-scale orthogonal channelization filter banks of individual or packet bursts of Wavelets. ~~This invention~~ The describes the new MS-CDMA and a means for the MS-CDMA to spread the users over the OFDMA/OWDMA channels over a wide frequency band ~~and simultaneously to~~ spread the users within each channel such that the resulting spectrum is equivalent to the current wideband CDMA spectrum and the architecture keeps the symbol rates equal to the individual channel frequency spacing for ease of synchronization and equalization to counter multipath. ~~This invention supports the use of higher order symbol modulations for CDMA and the corresponding increases in data rates comparable to OFDMA since the interference between users is greatly reduced. Variable transmit power control is supported for the different MS-CDMA groups of channels.~~